

What is claimed is:

1. A communication control apparatus comprising:
 - a group setting section that selects one or more nodes from among a plurality of nodes connected to a communication network and classifies the selected nodes as one node group; and
 - a registration section that, in association with each of the nodes classified as the one node, registers group identification information for identifying the node group,
 - wherein the group identification information can be used to identify nodes constituting a node group that should at least commonly receive data.
2. A communication control apparatus as claimed in claim 1 wherein said group setting section selects a plurality of nodes and establishes a new node group composed of the selected nodes.
3. A communication control apparatus as claimed in claim 1 wherein said group setting section performs selection operation to change an organization of nodes in a node group selected from among one or more node groups existing on said communication network.
4. A communication control apparatus as claimed in claim 1 wherein said communication control apparatus is included

in a given node connected to said communication network, said group setting section selects, from among one or more node groups existing on said communication network, a node group to which the given node should belong, and said registration section includes a memory that is used to store the group identification information in the given node to store the group identification information.

5. A communication control apparatus as claimed in claim 1 which further comprises an input section that performs an input operation for giving a group name to a newly-set node group or giving a new group name to an existing node group to replace a current group name of the existing node group, and wherein the group name given via said input section is registered as the group identification information.

6. A communication control apparatus as claimed in claim 1 wherein the group identification information is imparted to data to be transmitted via said communication network, to thereby allow the data to be transmitted to a plurality of nodes of a same node group.

7. A communication control apparatus as claimed in claim 1 wherein each of the nodes includes a plurality of types of data-inputting or data-outputting plugs, said group setting section is capable of setting a node group for each of the types of the plugs included in

each of the nodes, and

 said registration section registers the group identification information of the node group having been set for each of the types of the plugs included in each of the nodes.

8. A communication control apparatus as claimed in claim 1 wherein each of the nodes includes a plurality of data-inputting or data-outputting plugs,

 said group setting section is capable of setting a node group for each of the plugs included in each of the nodes, and

 said registration section registers the group identification information of the node group having been set for each of the plugs included in each of the nodes.

9. A communication control apparatus for inclusion in a given node to be connected to a communication network, a plurality of nodes to be connected to said communication network being classified into any of one or a plurality of node groups, said communication control apparatus comprising:

 a storage section storing group identification information of a node group to which the given node belongs; and

 a transmitter that, when data is to be transmitted to said communication network, transmits the data with group

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identification information imparted to the data.

10. A communication control apparatus for inclusion in a given node to be connected to a communication network, a plurality of nodes to be connected to said communication network being classified into any of one or a plurality of node groups, said communication control apparatus comprising:

a storage section storing group identification information of a node group to which the given node belongs; and

a receiver that receives data via said communication network, data to be transmitted via said communication network being imparted with group identification information indicative of a node group to which a node to receive the data belongs to, said receiver receiving the data on condition that the group identification information imparted to the data transmitted via said communication network matches with the group identification information, of the node group to which the given node belongs, stored in said storage section.

11. A communication control apparatus comprising:

a classification section that classifies a plurality of nodes connected to said communication network into any of one or a plurality of node groups;

a selector that selects a given node as a node of a particular function; and

a control section that performs control such that there exists only one node of the particular function per node group.

12. A communication control apparatus for inclusion in a given node connected to a communication network in an environment in which a plurality of nodes connected to said communication network are classified into any of one or more of node groups, said communication control apparatus comprising:

a selector that selects the given node as a node of a particular function; and

a control section that, when the given node is selected via said selector as the node of the particular function, cancels the particular function having so far been allocated to another node in such a manner that only one node of the particular function exists in a node group to which the given node belongs.

13. A communication control apparatus for inclusion in a given node to be connected to a communication network, said communication control apparatus comprising:

a selector that selects the given node as a node of a particular function; and

a control section that, when the given node is selected via said selector as the node of the particular function, controls the given node to communicate with another node on said communication network using, as

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identification information of the given node, a predetermined name representative of the particular function.

14. A communication control apparatus for inclusion in a given node to be connected to a communication network, said communication control apparatus comprising

a control section that, when communication is to be performed between the given node and another node of a particular function via said communication network, performs control such that the given node communicates with the other node after the given node identifies a node possessing a predetermined name representative of the particular function to be the node of the particular function.

15. A communication control apparatus as claimed in claim 11 wherein the particular function is a function of a word clock master.

16. A communication control method which permits communication between node groups, said communication control method comprising:

a step of selecting one or more nodes from among a plurality of nodes connected to a communication network and classifying the selected nodes as one node group;

a step of, in association with each of the nodes classified as the one node, registering group

identification information for identifying the node group; and

a step of, on the basis of the group identification information, identifying nodes constituting a node group that should at least commonly receive data.

17. A communication control method for execution in a given node to be connected to a communication network, a plurality of nodes to be connected to said communication network being classified into any of one or a plurality of node groups, said communication control method comprising:

a step of storing group identification information of a node group to which the given node belongs; and

a step of, when data is to be transmitted to said communication network, transmitting the data with group identification information, stored by said step of storing, imparted to the data.

18. A communication control method for execution in a given node to be connected to a communication network, a plurality of nodes to be connected to said communication network being classified into any of one or a plurality of node groups, said communication control method comprising:

a step of storing group identification information of a node group to which the given node belongs; and

a step of receiving data via said communication

network, data to be transmitted via said communication network group being imparted with group identification information indicative of a node group to which a node to receive the data belongs to, said receiver receiving the data on condition that the group identification information imparted to the data transmitted via said communication network matches with the group identification information, of the node group to which the given node belongs, stored by said step of storing.

19. A communication control method for inclusion in a given node to be connected to a communication network in an environment in which a plurality of nodes connected to said communication network are classified into any of one or more of node groups, said communication control method comprising:

a step of selecting the given node as a node of a particular function; and

a step of, when the given node is selected via said step of selecting as the node of the particular function, canceling the particular function having so far been allocated to another node in such a manner that only one node of the particular function exists in a node group to which the given node belongs.

20. A communication control method for execution in a given node to be connected to a communication network, said communication control method comprising:

a step of selecting the given node as a node of a particular function; and

a step of, when the given node is selected via said step of selecting as the node of the particular function, controlling the given node to communicate with another node on said communication network using, as identification information of the given node, a predetermined name representative of the particular function.

21. A communication control method for execution in a given node to be connected to a communication network, said communication control method comprising

a step of, when communication is to be performed between the given node and another node of a particular function via said communication network, performing control such that the given node communicates with the other node after the given node identifies a node possessing a predetermined name representative of the particular function to be the node of the particular function.

22. A computer program comprising computer program code means for performing all the steps of claim 16 when said program is run on a computer.

23. A computer program comprising computer program code means for performing all the steps of claim 17 when said program is run on a computer.

24. A computer program comprising computer program code means for performing all the steps of claim 18 when said program is run on a computer.